

## **Case Study Review and Potential Improvements in Quality and Cost of Kentucky's Health Care System Utilizing the FCC Healthcare Connect Fund**

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In December 2012, the FCC established the new Healthcare Connect Fund (HCF), which supports broadband connectivity, including Internet access, for eligible individual and consortia HCPs. The HCF is the newest component of the Rural Health Care Program. The HCF is an expansion of the original Universal Services program that began in 1997 to help mitigate the high cost of communication services for healthcare facilities that develop e-health applications such as telemedicine, PACS and integrated electronic health records. The HCF will provide a 65% subsidy for broadband services for non-profit healthcare facilities and will have an impact on all non-profit healthcare facilities in Kentucky, both urban and rural.

### **Hospital Case Study Review**

This study was done using one Kentucky hospital system with 10 community-based hospitals with a separate administrative headquarters/data center. The headquarters/data center has a 250M MPLS connection with an additional 45M Internet connection that serves all the company's facilities through the internal corporate network. One hospital has a 45M MPLS connection, one has a 30M MPLS connection and 8 hospitals have 25M MPLS connections. This system owns other healthcare-related facilities, such as home health agencies and primary care centers, but this study only includes the hospital and headquarters/data center facilities.

Current Cost for Broadband Services	\$61,617/month	\$739,404/year
65% HCF Subsidy	\$40,051/month	\$480,613/year
Unsubsidized Cost Paid by Hospital	\$21,566/month	\$258,791/year

### **Rural Health Care Pilot Program**

Prior to the establishment of the HCF, the Rural Health Care Pilot Program was launched in 2006 and currently supports 50 active projects in 38 states including the territories of Guam, American Samoa and the Northern Mariana Islands.

The Pilot Program has helped health care providers obtain broadband capability to implement telemedicine and telehealth applications. The pilots have demonstrated how broadband health care networks can significantly improve the quality and reduce the cost of providing health care in rural areas. As noted in the Rural Health Care Pilot Program Evaluation Staff Report (<http://www.fcc.gov/document/rural-health-care-pilot-program-evaluation-staff-report>), benefits of the pilot program include:

- \$18M savings in a state's Medicaid costs over 18 months as a result of the implementation of a telepsychiatry program with consults available to patients 24/7.
- Tele-stroke services provided for neurology patients within minutes as opposed to hours. Given that time is of the essence for stroke victims, instant access to specialized care can be life-saving.
- Members of a state's Health Information Exchange linked 53 hospitals and 9,000 physicians, and have adopted, implemented, upgraded, or successfully demonstrated the use of certified electronic health record technology.

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- \$1.2M savings in transfer expenses over a 30-month period, following the implementation of electronic Intensive Care Unit (e-ICU) services. The average number of days patients spent in the ICU was also decreased.
- Reduction in the turnaround time on x-ray readings from 20 to 7 minutes.
- Network and telemedicine services provided over a state's network have enhanced physician satisfaction and collegial support.

### **Improvements in Quality and Cost of Health Care**

#### Increased Utilization of Broadband

Kentucky healthcare providers will substantially benefit from the HCF Program; not only by receiving the 65% subsidy for broadband services, but from the possibilities that broadband can bring to the delivery of health care. According to a recent national survey, Kentucky currently ranks 47<sup>th</sup> in broadband usage. The need to procure broadband and increase current bandwidth speeds is significant to improve the quality and reduce the cost of delivering health care in rural areas.

#### Kentucky Health Information Exchange

Much attention has been devoted to the use of the electronic health information exchange as a means to improving the healthcare system. Kentucky has created a clear strategy and coordinated plan to create business drivers for health information exchange that support and act as catalysts for care transformation and the achievement of Meaningful Use. Broadband services will be critical for the Kentucky Health Information Exchange (KHIE) providers in the exchange of health information. As Kentucky's healthcare industry embraces information technology (such as telehealth, electronic health records, digital archiving of radiologic images, and the general modernization of the healthcare industry), broadband services will be critical to healthcare provider's success.

#### Increase Utilization of Telemedicine

Broadband makes possible the use of telemedicine to improve health care delivery in rural areas. In addition to delivering needed medical care to patients in remote locations, telemedicine lowers the cost of providing health care, reduces travel time and expense for patients, providers and doctors, and brings needed revenue to endangered rural clinics and hospitals. Broadband also facilitates other important telehealth applications such as transmission of medical images, exchange of electronic health records, remote consultations with specialists, and training of rural medical personnel.

#### Meaningful Use Requirement

The implementation of healthcare reforms and the mandate to achieve Meaningful Use to avoid financial penalties from Medicare and Medicaid is also driving the need to have appropriate broadband technologies for electronic submission of billing, e-prescribing and other e-health activities mandated in the new reforms.

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### Commonwealth Healthcare Network Fund

A strong, community-based healthcare system is one of the economic development building blocks that helps a community thrive. Kentucky has established the Commonwealth Healthcare Network Fund (CHFN), a consortium administered out of the Office of Broadband Outreach and Development (OBOD) within the Finance and Administration Cabinet. Kentucky is supporting our rural communities by leading this statewide consortium of healthcare providers by assisting them in reducing their broadband costs and increasing access to the broad range of modern e-health services that will benefit all Kentuckians.

### Kentucky Information Highway (KIH3) Master Services Agreement

The CHFN is leveraging the existing Kentucky Information Highway (KIH3) Master Services Agreement for the procurement of telecommunications and/or broadband services for all its participants. The KIH3 was initially established in 1991 through competitive bid. The main purpose of the network infrastructure was to afford equalized access to Commonwealth government entities, as well as provide a cost-effective means for communities and citizens in each of Kentucky's 120 counties to access numerous services (internet, systems, messaging, etc.) related to state and local government, education, health care, economic development and public safety. The KIH3 contract provides a single point of contact (SPOC) with the Commonwealth's carrier for ordering, provisioning, troubleshooting and supporting the KIH3 telecom circuits statewide. This is especially important since the current infrastructure is comprised of multiple companies with geographically dispersed telecom networks that currently serve over 4,000 public facilities/locations across the Commonwealth. The contract provides for circuit speeds from 64 Kbps to 10 Gbps with a flat monthly rate for any location in the state.